

Virtual exchange program building: an assessment-based approach

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Abstract

Virtual Exchange (VE) provides a strategic approach for higher education institutions to internationalize. This study investigated how a US Community College (US-CC) system and their partners started and grew their internationalization program through VE with teacher training, assessment, and support from a nonprofit bridge organization. Data were collected on program growth over three years, 2017-20, totaling 13 modules, 29 faculty, and 14 campuses. Cumulatively, students completed 341 pre-module and 202 post-module surveys which assessed the community colleges' student learning goals: intercultural competence and awareness of the wider world, confidence in finding success in the global workforce, and ability to deploy 21st century skills (e.g. technology and teamwork). Quantitative and qualitative results provided concrete and nuanced evidence of program effectiveness and suggested positive impact. Our findings have two main implications: (1) positive student impact can help grow and sustain VE and other international programming; and (2) teacher training informed by and adapted with student assessment can help institutionalize VE programs.

Keywords: intercultural competence; internationalization; community college; virtual exchange; assessment.

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How to cite this article: Ruther, N. L., Jeffress, A. K., Shi, L., & Rabke, S. (2021). Virtual exchange program building: an assessment-based approach. *Journal of Virtual Exchange*, 4(SI-IVEC2020), 70-94. <https://doi.org/10.21827/jvc.4.37156>

1. Introduction

VE is a core element of internationalization initiatives in higher education, providing benefits at student and institutional levels. VE can internationalize parts of an institution's overall curriculum and complement traditional mobility programs (ACE, n.d.; Ward, 2016). The intentional layering of international activities on campus, including VE, can yield greater intercultural and global knowledge results than mobility alone (De Wit, Hunter, Egron-Polak, & Howard, 2015; Soria & Troisi, 2014; Ward, 2016). International travel is not feasible for all students. The 2019 Open Doors Report stated that 10.9% of US undergraduates studied abroad for credit in 2017-18 (Redden, 2019). For community colleges, the number is less than half of one percent (IIE, 2019 cited in AACC, 2020). Low participation is due to "prohibitive costs, perceived delays to degree completion, and perhaps also the dearth of peer models who have studied abroad" (Custer & Tuominen, 2017, p. 348). The subject of this study, a US-CC system, began a VE/internationalization effort in 2017 capitalizing on its strong faculty, good ties with global employers, and prior sporadic mobility efforts.

The aim of this study is to explore whether it is possible to use VE as the foundation to start a scalable and sustainable internationalization strategy. To answer this, we analyzed the experience of the three-year pilot program led by a tech-focused central coordinating unit serving a US-CC system's 12 campuses. To dovetail with three elements of the system-wide mission, the program adopted three meta-goals. By the end of each VE module, students would demonstrate: (1) greater intercultural competence and awareness of the wider world; (2) increased confidence in finding future success in the global workforce; and (3) increased ability to deploy 21st century skills (e.g. technology and teamwork).

Program execution required faculty participation in training for class-to-class VE with international partners and assessment to determine effectiveness in accomplishing VE-specific Student Learning Outcomes (SLOs). To support these requirements, the program contracted Gazelle International, a US-based nonprofit that specialized in supporting turnkey systems for VE and internationalization as a bridge organization. Gazelle International provided training and VE module support for faculty within the US-CC and international partnering institutions and assessed SLOs. We refer to class-to-class VE in this article as CLICK⁵ (Collaborative Learning for International Capabilities and Knowledge), the general term for Gazelle International's VE-internationalization approach.

This article investigates the growth and effectiveness of a US-CC system's CLICK program with French and Mexican partners over six semesters (2017-2020) by exploring three questions.

5. This VE system, Click or CLICK, is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License.

- Did the program grow in the number of new and continuing VE modules, teachers, and campuses over three years of implementation?
- Did participating students reach SLOs over three years in relation to intercultural competence and awareness of the wider world, confidence in finding success in the global workforce, and ability to deploy 21st century skills?
- What did qualitative results reveal about SLOs?

Grounded in analysis of three years of program data on students, faculty, and campuses, we discuss the extent to which the program has grown and has achieved SLOs based on pre- and post-module surveys. This research contributes to the expanding field of VE assessment connecting student and program results.

2. Literature review

Our study draws on O'Dowd's (2018) definition of VE as "the engagement of groups of learners in online intercultural interactions and collaboration projects with partners from other cultural contexts or geographical locations as an integrated part of their educational programmes and under the guidance of educators and/or expert facilitators" (p. 5). VE modules are one way to achieve internationalization goals (Deardorff, 2004; Ward, 2016). Higher education institutions have prioritized a variety of internationalization methods due to the "increasingly diverse higher education students in increasingly diverse higher education contexts, and the increasingly diverse world in which those students will engage as graduates" (Killick, 2017, p. 1, see also McKinney et al., 2004 and Salisbury, Umbach, Paulsen, & Pascarella, 2009). Internationalization strategies such as mobility programs and curricular internationalization can accomplish a number of institutional outcomes including increased retention and degree completion (Raby, Rhodes, & Biscarra, 2014); student growth in intercultural competence (Asia Society, n.d.; Wood, 2019) which expands post-graduation career options (British Council, 2013); and improved diversity and inclusion within programs and on campus (Flores et al., 2014). Educational institutions aim to graduate interculturally competent citizens ready to work effectively in connected, globalized, and rapidly changing societies and economies (Killick, 2017; Knight, 1997; Leask, 2015; Lumb, Razack, Arman, & Wugalter, 2019). To further these goals, VE serves as a strategic hinge between mobility and curricular internationalization (O'Dowd, 2017; Ward, 2016).

Deardorff (2004) synthesizes numerous definitions of intercultural competence into knowledge, skills, and attitudes, manifested in frame of reference shifts and behavioral changes (see also Wiseman, 2002 and Deardorff, 2006). Common elements include valuing cultural diversity, awareness of and

openness to other worldviews, awareness of one's own culture, respect, empathy, and the ability to cope with unfamiliar or ambiguous situations (Aerts et al., 1994; Byram, 1997; Council of Europe, 2016; Deardorff, 2004; Hanvey, 1976; Paige, 1993). The European policy experiment Evaluating and Upscaling Telecollaborative Teacher Education (EVALUATE), the largest study of class-to-class VE at the time of its completion, found that students' intercultural and foreign language competencies, along with digital skills, improved across 25 field trials in 16 countries (Baroni et al., 2019).

Many components of intercultural competence overlap with workforce qualities that employers value highly. These include awareness of one's own culture and understanding cultural differences, openness to new ideas and ways of thinking, adaptability, flexibility, tolerance of ambiguity, respect for others, and the ability to listen and observe (Aerts et al., 1994; British Council, 2013; Deardorff, 2004). Behavioral results related to intercultural competence, such as communicative competence, role behaviors in group settings, and interaction management (Ruben, 1976), are also desirable in the workplace and for effective collaboration. The workforce needs graduates ready to work in diverse settings with problem-solving, communication, critical thinking, and collaboration skills (AACU, 2011). These, along with global awareness, creativity, innovation, technology, online and offline communication, initiative, and self-direction, are elements of a mix commonly called 21st century skills (Johnson, 2009; Larson & Miller, 2011).

These intersecting workforce and cultural skills are increasingly important within career and technical education and community colleges (Asia Society, n.d.). Manko (2020) illustrates the importance of digital skill development through online and hybrid courses for a successful 'School-Work Transition' for employers and students. Collaborative VE, through digital media, enhances comfort with technological tools, the understanding of these tools in different sociocultural settings, and how they shape ways of thinking (Hauck, 2019). To implement technology effectively into collaborative VE modules, a Technological Pedagogical Content Knowledge (TPACK) framework is useful for teachers so they can apply their knowledge of pedagogy, content, and technology and navigate the interaction of all three in the shared learning space (Koehler, Mishra, & Cain, 2013). In higher education faculty development programs introducing TPACK, Mourlam (2017) found both workshops and mentoring were welcome and effective.

Faculty support and training is necessary to contribute to and sustain VE, internationalization and SLOs successfully (ACE, n.d.; Ward, 2016). For the class-to-class model of VE in the present study, collaborating teachers enter into a partnership to co-create SLOs, following co-teaching frameworks (Fluijt, Bakker, & Struyf, 2016; Murawski & Lochner, 2017; Pratt, 2014; Rytivaara, Pulkkinen, & de Bruin, 2019). To achieve Pratt's (2014) notion of co-teaching symbiosis, teachers' core competencies include agreement on goals and responsibilities, trust and respect, communication and adaptability,

ongoing reflection, and assessment of instruction and SLOs. The added complexity of intercultural competence goals in VE makes partner agreement a priority. The [Stevens Initiative's \(2020a\)](#) VE Guide highlights the misguided assumption that international and intercultural contact and online teamwork alone automatically lead to deeper skill development, noting the importance of curricular design teams to integrate into the VE program activities that explicitly increase intercultural competence and other skills. [Wiggins and McTighe's \(2005\)](#) backward design principles can aid teachers' design of learning activities that guide students to desired SLOs. With backward design, teachers mirror and disaggregate program and curricular goals into specific, achievable, and measurable learning goals so students understand what they should be able to do throughout and at the end of the course ([Fink, 2013](#); [Nilson, 2016](#)).

In higher education, data-informed decision-making is essential for successful internationalization ([ACE, n.d.](#)). The assessment of program- and classroom-level goals provides a lens for understanding the value of VE and other internationalization approaches. Recently, studies like EVOLVE ([EVOLVE Project Team, 2020](#)), EVALUATE ([Baroni et al., 2019](#)), and the [Stevens Initiative's \(2020b\)](#) annual survey of the field have begun to address the gap in program-level understanding of VE's impact. The present study adopted backward design principles and a goal-focused, iterative assessment-based approach⁶ to develop collaborative VE teaching competencies that further progress toward SLOs.

3. Methods

Here we explain the context of CLICK teacher training and a US-CC system's program goals. After discussing program context, we describe participants, data collection, and analysis methods used to answer our research questions.

3.1. Context and program overview

Faculty and support systems are crucial for internationalization to succeed ([Matross Helms & Asfaw, 2013](#)). In this study, Gazelle International served as service provider⁷, bridging a gap in the institutional partners' capabilities by providing program advising, faculty training, mentoring for teaching teams, and student pre- and post-module assessments. The CLICK system consisted of five sequential elements: Explore, Connect, Design, Run-Support, and Assess-Recognize. Teacher training normally included seven to eight facilitated sessions where teaching partners designed a

6. An assessment-responsive training approach can also positively impact the teacher cohort, which in turn has numerous benefits for program outcomes, as seen in [Hickson \(2018\)](#).

7. See more on service-provider approaches in [O'Dowd \(2017\)](#).

shared learning space to connect their classes, guide their students in intercultural teamwork, and help students master 21st century technologies and communication skills while learning the home course content. Following backward design principles (Wiggins & McTighe, 2005), teachers started by clarifying shared module goals and how they would be encapsulated in final team projects, e.g. videos, presentations, or business plans. They then developed scaffolded learning activities, smaller deliverables, rubrics, and team-building activities to guide students toward the SLOs. As the modules ran, teachers received ongoing mentoring from Gazelle International to troubleshoot and adopt new practices as needed. CLICK modules were a minimum of four and maximum of 12 weeks. English was the main language in all modules except second language courses.

3.2. Participants

In 2017-2020, 341 students responded to the pre-module and 202 to the post-module survey for their respective CLICK modules. All were postsecondary students in a US-CC system, various French *Instituts universitaires de technologie* (IUTs), or a university in Mexico. The US-abroad mix was 45% US and 55% abroad with (N=341) over three years⁸.

3.3. Methods and procedures for data collection and analysis

This study used a mixed methods approach, collecting both quantitative and qualitative data through a survey for four reasons: improve data accuracy, produce a more complete picture with information from different sources and kinds of data, avoid or reduce biases that could surface in qualitative or quantitative data when used alone, and reveal the development of data over time to build on initial findings (Denscombe, 2008). Mixed methods' flexibility also permitted modifications to survey questions in successive training iterations while still tracking key data on SLOs.

The survey design team included a curriculum and assessment expert from a local university, Gazelle International's founder, program leaders, and the institutional research office of a US-CC system's lead campus. The team created its own survey consistent with known inventories, e.g. Intercultural Development Inventory (IDI, n.d.), to facilitate the adaptive, assessment-based training approach to achieving the program's three SLOs. The survey also drew on the outcome-based framework survey developed specifically for assessing community college internationalization (CCIES, n.d.). The survey's three sections included: demographics, global readiness (intercultural competence and workforce preparation), and personal preparation (team/technology skills)⁹. Both the pre- and

8. For full respondent demographics, see Appendix A.

9. See Appendix B for the pre- and post-module survey questions used in 2017-2020.

post-module surveys contained closed-ended questions using a five-point Likert scale, open-ended questions related to demographics, and two final open-ended questions aimed to elicit more in-depth responses on students' perceptions of VE. Students self-reported all data, a common practice in intercultural competence assessments (Deardorff, 2004). In the results below, 'Year 1' refers to the 2017-2018 academic year, 'Year 2' to 2018-2019, and 'Year 3' to 2019-2020.

Using SurveyMonkey¹⁰, we distributed the survey links to each professor to share with their students. US and abroad students completed the pre-module survey after the teacher introduced the CLICK module but before students began collaborating¹¹. After the closing sessions and final project submissions, all students received a post-module survey. The surveys were anonymous but asked students to identify their campus and professor. While completion was not mandatory, teachers encouraged students to participate to help improve the program.

The closed-ended questions were analyzed with comparisons by year, campus (US or abroad), and pre- and post-data. The open-ended questions were analyzed using thematic analysis to cluster responses into categories based on the program's three SLOs (Miles & Huberman, 1986; Thomas & Harden, 2008). For the categories listed in Table 1 and Table 2, two researchers consulted, decided on key words indicating each cluster, and independently decided where to sort each response. Where there were discrepancies between the two researchers' responses, we consulted key words and agreed on final categorization. Using NVivo as a reliability check, we confirmed the keywords from our manual categorizing and independent researchers' data analysis.

4. Results

Here we share results on our three stated research questions: program growth in modules, teachers, and campuses; achievement in the three key SLOs; and qualitative results' insights into SLOs. Section 5 discusses what these results show related to VE program goals and teacher training and mentoring.

4.1. Program growth over three years of implementation

A US-CC system created the pilot program for proof of concept of their ability to create a sustainable VE program across the 12-campus system in three years. Beyond the three SLOs, the core metrics included: number of new and repeating teachers involved, completed and repeating CLICK modules,

10. <https://www.surveymonkey.com/>

11. 'Module' refers to the CLICK component of the home courses. 'Project' refers to the international student teams' final project completed for the module.

and number of US and international campuses involved. There were no hard targets but rather rules of reason to determine scalability progress.

Figure 1. CLICK program growth: number of modules and teachers by year (2017-2020)

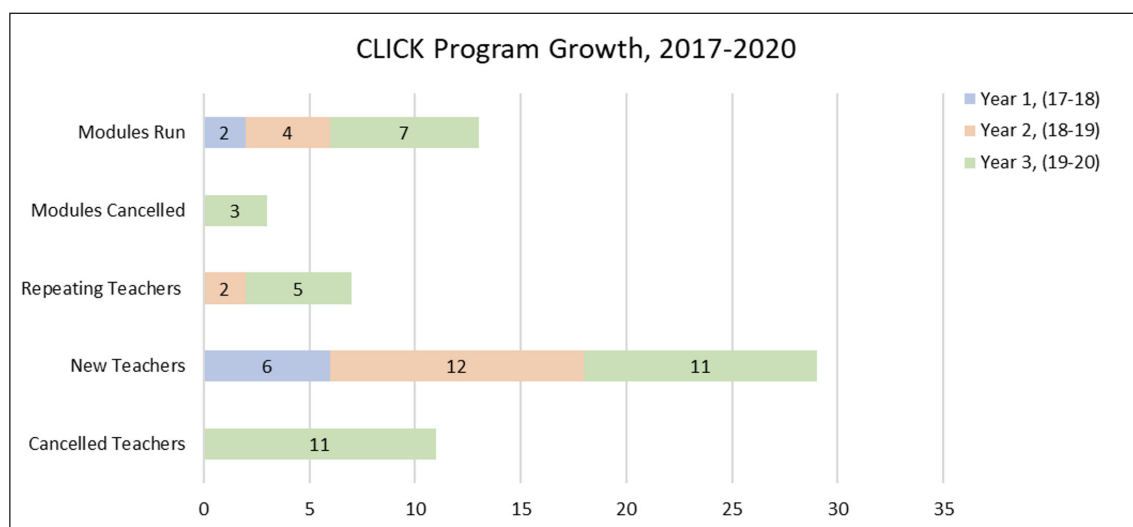


Figure 1 shows progress toward the program's institutional goals, i.e. numbers of CLICK modules, teachers, and campuses. Modules (N=13) grew steadily Year 1 (n=2), Year 2 (n=4), and Year 3 (n=7). First-time teachers totaled 29 over three years. First-time and repeating teachers (total N=36) included: Year 1 (n=6, all new), Year 2 (n=14, 12 new, 2 repeating), and Year 3 (n=16, 11 new, 5 repeating). Many modules ran with multi-teacher teams – US:abroad – 2:2 and 3:3, as well as 1:1 teaching pairs. In Year 3, three modules that began in spring 2020 taught by 11 teachers were canceled due to COVID-19. As detailed in Appendix C, N=14 unique campuses participated in the CLICK program including: US-CC system's campuses (n=7), IUTs in France (n=6), and a Mexican university (n=1). Three US and two abroad campuses hosted multiple new and repeating modules while four US and five abroad campuses only hosted new modules. Appendix C also contains case samples with module details.

In Figure 2, the student numbers show accelerating growth reaching a cumulative total of 341 students over three years. In the first two years with new and repeating teachers with large home classes in both countries, the student numbers in Year 1 (n=70) grew in Year 2 (n=131). Year 3 shows a total of 140 students completing CLICK modules with an additional 89 students who started modules that were canceled due to COVID-19.

Figure 2. CLICK student numbers by year: US-CC system and partners abroad (2017-2020)

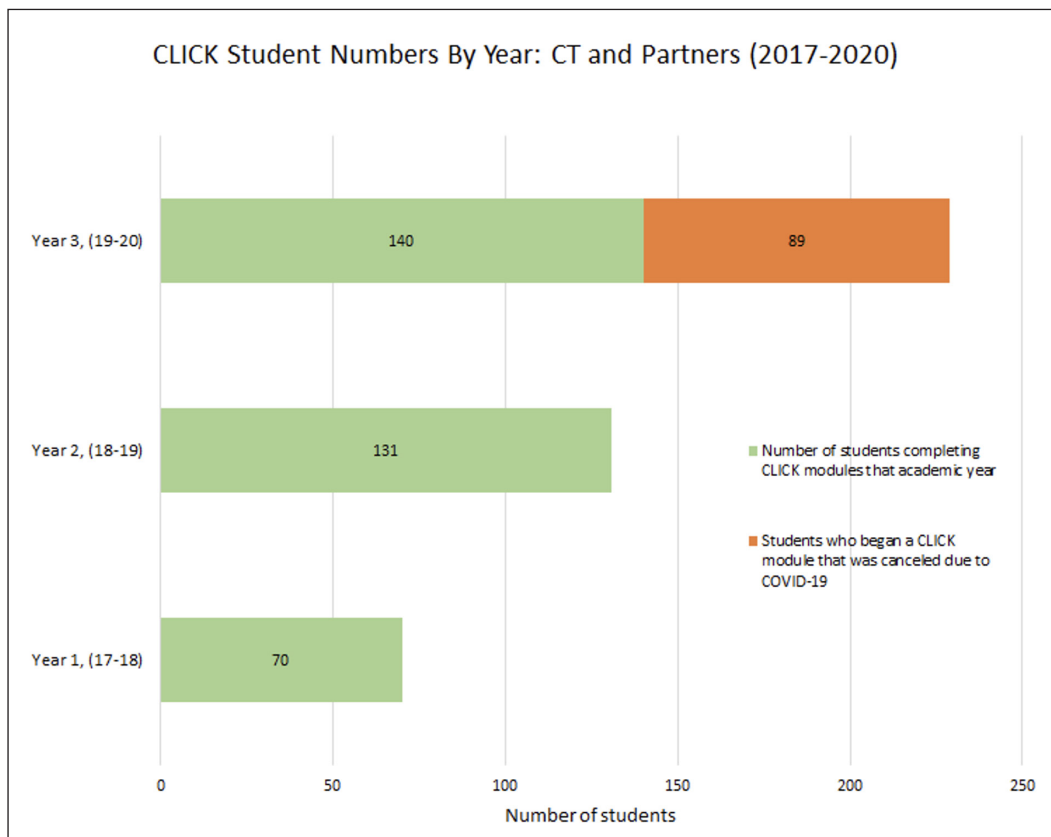


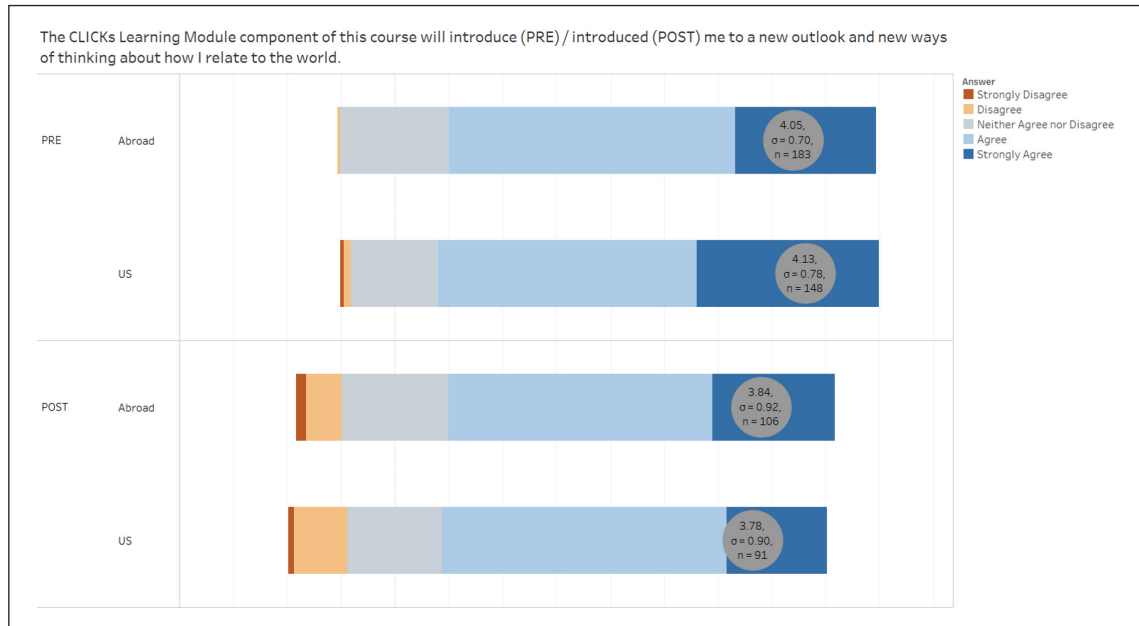
Figure 1 and Figure 2 above demonstrate that the program grew in the number of new and continuing VE modules, teachers, and campuses over three years. We now turn to results on SLOs.

4.2. Did students achieve the three targeted SLOs?

4.2.1. SLO 1: Greater intercultural competence and awareness of the wider world

Figure 3 displays the degree of student agreement that CLICK would introduce students to a new outlook and ways of thinking about the world. This question aimed to elicit responses related to students' development of an ethno-relative view, a desired internal outcome of intercultural competence that leads to more acceptance, adaptation, and integration strategies (Bennett, 1993).

Figure 3. Outlook and ways of thinking about the world, 2017-2020 comparing US and abroad groups (pre-module n=331, abroad, n= 183, 55.3% and US, n=148, 44.7%; post-module n=197, abroad, n= 106, 53.8% and US, n= 91, 46.2%)



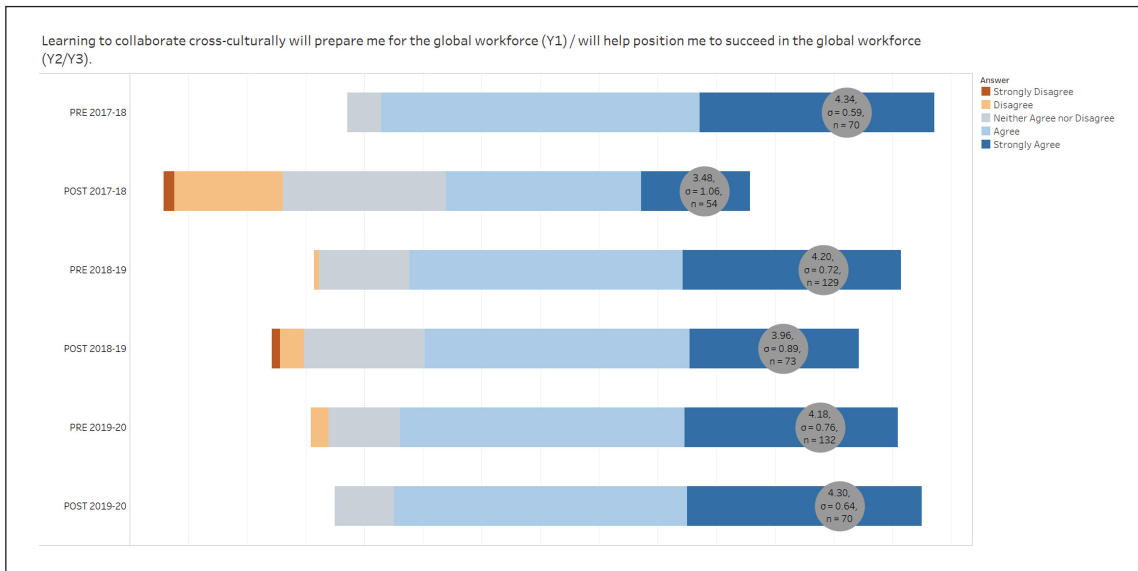
Nearly all students, 97% (N=341), responded to this pre-module question. In Figure 3 in the pre-responses ($M=4.05$ for abroad, $M=4.13$ for US), students indicated they expected to be introduced to new perspectives that would impact their outlook and how they related to the world. The independent t-test demonstrated there was no significant difference between the two groups of students (pre: $t(329)=0.968$, $p=0.334$, post: $t(195) = 1.352$, $p=0.178$). Without differentiating statistically, the post-results for both groups showed lower means ($M=3.84$ for abroad, $M=3.78$ for US) and wider dispersion of responses ($SD\ 0.90$ US; $SD\ 0.92$ abroad) compared to pre-results ($SD\ 0.78$ -US; $SD\ 0.70$ abroad).

4.2.2. SLO 2: Increased confidence in finding future success in the global workforce

Figure 4 displays the degree of student agreement that intercultural collaboration would prepare them for success in the global workforce. In Year 1, the question read: 'Learning to collaborate cross-culturally will prepare me for the global workforce'. We altered the question to: 'Learning to

collaborate cross-culturally will help position me to succeed in the global workforce' in Year 2 and continued this wording in Year 3¹².

Figure 4. Intercultural collaboration and preparation for the global workforce comparing student responses by year 2017-2020: Year 1, pre (n=70), post (n=54); Year 2, pre (n=129), post (n=73); and Year 3, pre (n=132), post (n=70)



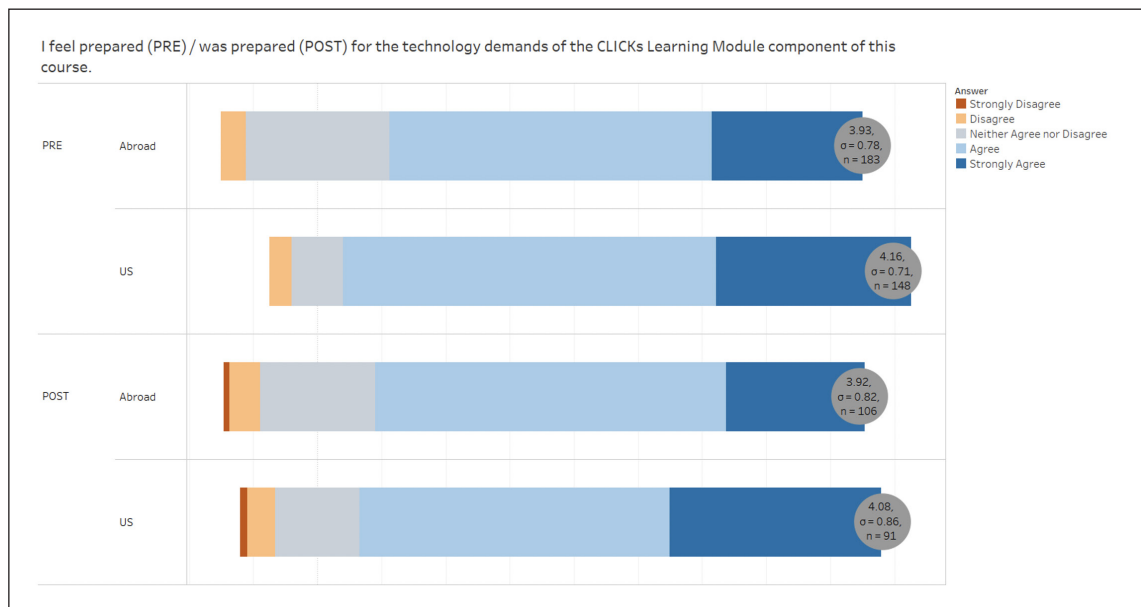
Nearly all students, 97% (N=341), responded to this pre-module question. In Year 1, the pre to post gap was wide. Students' pre-responses were heavily agree/strongly agree ($M=4.34$, $SD=.59$) and post responses shifted toward disagree/strongly disagree ($M=3.48$, $SD=1.06$), along with wider dispersion of responses. This indicated disappointment in how the CLICK module, as students' immediate source of intercultural collaboration, would 'prepare them for the global workforce'. Students' open-ended responses indicated they saw no immediate employment benefits from CLICK. In Year 2, students responded to the pre-module $M=4.2$, $SD=0.72$, and the post-module survey $M=3.96$, $SD=0.89$. In Year 3, students' pre-module responses were similar to Year 2, $M=4.18$, $SD=0.76$. However, the post survey shift upward $M=4.30$ and tighter $SD=0.64$ demonstrated a continuous improvement of students' responses connecting the CLICK module with global workforce preparation.

12. Moving into Year 5, we altered the question to 'Learning to collaborate intercultural will position me to succeed in the global workforce' to recognize intercultural as interacting across cultures and cross-cultural as viewing the comparisons across cultures (Lustig & Koester, 1993).

4.2.3. SLO 3: Increased ability to deploy 21st century skills (e.g. technology and teamwork)

Figure 5 and Figure 6 address key elements of 21st century skills. They display the degree of student agreement with statements on student preparation to work effectively with technology and in international collaborative groups to manage CLICK module learning demands.

Figure 5. Technology preparedness of students 2017-2020 comparing US and abroad groups (pre-module n=331, abroad n=183, 55.3%, US n=148, 44.7%; post-module n= 197, abroad n= 106, 53.8 %, US n=91, 46.2 %)

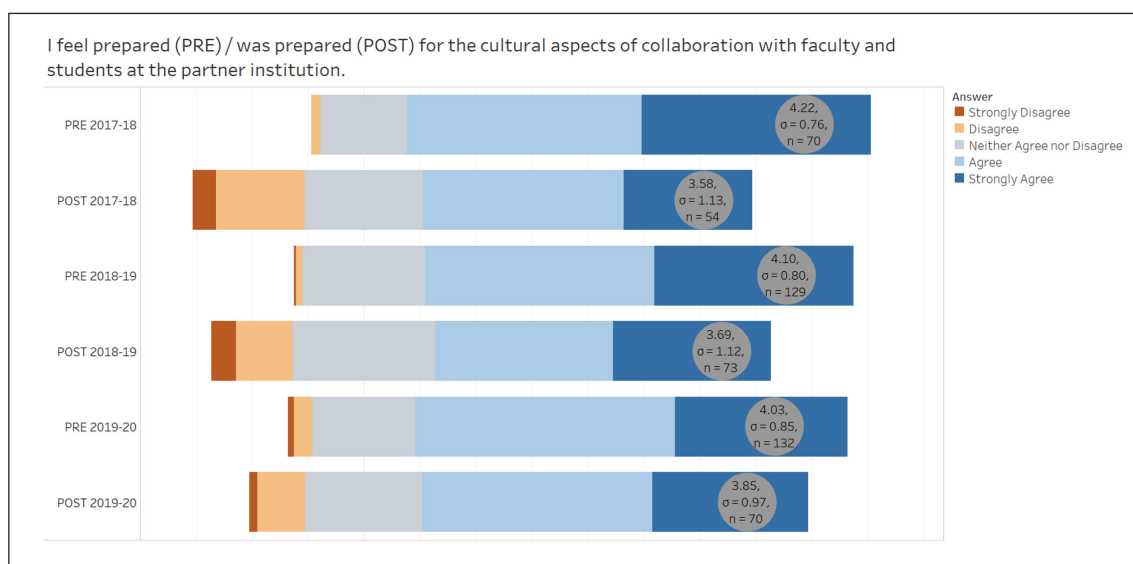


In Figure 5, 97% of respondents (N=341) across Years 1-3 indicated they were overall prepared for the technology demands of the CLICK module. The independent t-test demonstrated there was no significant difference between the US and abroad students ($t(329) = 2.668, p=0.338$). Students' pre-module responses were agree/strongly agree ($M=3.93$ abroad; $M=4.16$ US), indicating largely positive preparedness. Post-responses stayed stable for the abroad students (post-module $M=3.92$), while the post-responses for US students fell slightly ($M=4.08$). In both, the strongly disagree component, while small, appeared only in the post-responses.

In Figure 6, 97% of respondents (N=341) agreed and strongly agreed in each year's pre-module on being prepared for the cultural aspect of international collaboration ($M=4.22, M=4.10, M=4.03$). The

post-module responses were less positive ($M=3.58$; $M=3.69$; $M=3.85$) but the pre to post gap declined each year. The post-module standard deviations ($SD=pre=.76$, $post=1.13$; $SD\ pre=.80$, $post=1.12$; $SD\ pre=.85$, $post=.97$) shifted to include more disagree and strongly disagree responses indicating lower perceived preparedness at the end of the CLICK module. This gap was most acute in Year 1, shrinking in Years 2 and 3 but not reversing.

Figure 6. Collaboration preparedness of students 2017-2020 comparing student responses US and abroad groups by year: Year 1, pre (n=70), post (n=54); Year 2, pre (n=129), post (n=73); and Year 3, pre (n=132), post (n=70)



4.3. Results from the qualitative data in relation to SLOs

In both pre- and post-module surveys, two broad open-ended questions provided a check on the validity of the closed-ended responses, added insight into students' perceptions, and suggested possible new closed-ended questions for future years. All three years' pre- and post-surveys asked students two open-ended questions.

- PRE 'What do you think will be...' / POST 'What was your biggest challenge with the CLICK learning module'?
- PRE 'What do you think could be...' / POST 'What was the biggest reward from participating in this CLICK module'?

Table 1. Biggest challenge of the CLICK module? Results of open-ended question from 2017-2020 (n=195)

What was your biggest challenge with the CLICK learning module?	
Response category	Respondents
1. Communication	73 (37.4%) (40 of the 73 explicitly mentioned the language barrier)
2. Technology	31 (15.8%)
3. Time zones	27 (13.8%)
4. Collaboration/Teamwork	22 (11.3%)
5. Organization/Project management	20 (10.3%)
6. No challenges	15 (7.7%)
7. Other	7 (3.6%)

Addressing the greatest challenges in the CLICK module, [Table 1](#) shows the categorized responses of 96.5% of post-module respondents (N=202) to an open-ended question. Students most frequently reported Item 1, ‘communication’ (n=73, 37.4%), with sample responses including over half (n=40) specifically mentioning language barrier difficulties, “staying in contact with each other”, “understanding the French kids”, and “contacting my group members”. Items 2-5 (n=100, 51.2%) addressed the pragmatic module skills of technology, teamwork, and organization/project management. Item 6 (n=15, 7.7%), ‘no challenges’, was worth noting as it was somewhat surprising. Item 7 (n=7, 3.6%), ‘other’ items, were mixed: getting out of one’s comfort zone (n=3, 1.5%), COVID-19 (n=2, 1.0%), and understanding the assignments (n=2, 1.0%).

Table 2. Greatest reward of the CLICK module? Results of post-module open-ended question from 2017-2020 (n=196)

What was the greatest reward from participating in this CLICK learning module?	
Response category	Respondents
1. Meeting people, making friendships and connections	56 (28.6%)
2. Learn about other cultures, broaden perspectives, have new experiences	51 (26.1%)
3. Collaboration/Teamwork	26 (13.3%)
4. Improved communication	19 (9.7%)
5. Finishing the final project successfully	15 (7.7%)
6. (The prospect of) Getting to travel	7 (3.6%)
7. Overall experience of the module	5 (2.5%)
8. Real-world application of what students learn	5 (2.5%)
9. Résumé/CV or career advantages	4 (2.0%)
10. Other	8 (4.0%)

Addressing students' greatest rewards during the CLICK module, [Table 2](#) shows the categorized responses of 97% of post-module respondents (N=202) to an open-ended question.

Qualitative responses in Items 1-4 (n=152; 77.6%) focused on social, cultural, and collaboration items including: social connections and friendships (28.6%), expansion of their worldview (26.1%), collaboration (13.3%), and improved communication (9.7%). Items 5-9 (n=36; 18.3%) provided more pragmatic responses including: prospects of travel, successful completion of the project, overall experience of the module, real-world applications of learning, and CV/resumé advantages. Item 10, 'other' responses, (n=8; 4%) included: learning technology tools (n=3; 1.5%), learning other ways of working and thinking (n=3; 1.5%), and recognition for completing the module (n=2; 1.0%).

5. Discussion

For a US-CC system's program building goals (4.1), the data showed broadly positive results over three years along with increasingly positive student achievement. Student survey results (4.2) indicated positive achievements in SLOs along with opportunities for improvement. The qualitative responses (4.3) on major rewards and challenges provided insight into SLOs in students' own wording, added nuance to our results, and helped target ways to improve.

5.1. Did the program grow in the number of new and continuing VE modules, teachers, and campuses over three years of implementation?

[Figure 1](#) and [Figure 2](#) indicated that the program grew in all key dimensions (see Section 4.1). Steady growth in new and repeating teachers validated the program's faculty anchoring strategy. Early enthusiasm translated into teachers recruiting colleagues and raising the program's profile. Goal-based design training ([Wiggins & McTighe, 2005](#)) fostered cross-disciplinary teaching teams beyond 1:1 pairings per module that helped include more students. Larger teaching teams also amplified positive effects for the cohort identity, which [Hickson \(2018\)](#) shows as impactful for teachers to share ideas and best practices as well as for students.

The research team reviewed program and SLO assessment data each year to guide Gazelle International's iterative program adjustments in teacher training and support (see Section 5.2 and 5.3 below). Quantitative and qualitative data identified tangible and more subtle areas for VE program improvement, with both types being useful in adapting teacher training to meet student needs and serve program goals. Our results indicate that consistent quantitative data over time can show the overall progress of a program in core areas.

**5.2. Did participating students reach SLOs over three years in relation to:
intercultural competence and awareness of the wider world;
confidence in finding success in the global workforce;
and ability to deploy 21st century skills?**

In response to the closed-ended questions corresponding to all three SLOs, we saw overall positive results. As noted, there were several areas where increased awareness of the world and preparedness for intercultural collaboration declined from pre to post results. We posit that the decrease in agreement could reflect a growing awareness of the actual demands and range of skills required to effectively collaborate with domestic and international teammates, learn new technologies, and improve intercultural competence (AACU, 2011; Hauck, 2019; Johnson, 2009; Leask, 2015).

*5.2.1. SLO 1: Greater intercultural competence, awareness of the wider world
(see Section 4.1.1, Figure 3)*

Regarding how CLICK enhances students' awareness, perspectives, and openness to the world, post-module results mixed negatives and positives compared to mainly positive expectations at the start. While seemingly disappointing, these results may have marked a recalibration of students' self-awareness or a reflection of their intercultural sensitivity in the present, specific context (Acheson & Schneider-Bean, 2019). For teachers to support this SLO, they needed to create more concrete and targeted behavioral goals, disaggregating them into realistic learning tasks as indicated by Fink (2013) and Nilson (2016).

Much as teachers needed to provide concrete, achievable learning goals for students to master complex topics, so too did teacher training need to provide guidance for better understanding of intercultural competence. After Year 2, Gazelle International trainers paired intercultural frameworks with real-world applications, e.g. Bennett's (2014) Developmental Model of Intercultural Sensitivity with a community college SLO rubric (Wood, 2019). They provided sample guides relevant to teachers' fields, e.g. the Intercultural Competence Assessment (INCA, 2004) for the engineering focus of the IUTs and the tech-focused central coordinating unit of the US program or the Hofstede Country Comparison (Hofstede Insights, n.d.) for business fields. With these, they guided teachers to create small, interventional activities for students to become more self-aware and recognize cultural issues. Following Murawski and Lochner's (2017) call for frequent reflection and feedback to enable students to develop desired behaviors, Gazelle International provided teachers a mid-semester check-in form to help students reflect on cultural effects on teamwork.

5.2.2. *SLO 2: Increased confidence in finding future success in the global workforce*
(see Section 4.1.2, [Figure 4](#))

On CLICK's contributions to future success in a global workforce through intercultural collaboration, Year 1 results shifted from nearly all positive to positive mixed with negative responses. The post-module qualitative answers suggested students understood the question to mean job placement. In light of these findings, Gazelle International trainers reflected with Year 1 teachers to recalibrate training for the next cohort to foster the long-term SLO of workforce success while better disaggregating the concept into more concrete tasks and measurable behaviors ([Fink, 2013](#)). We changed the survey question to have a clearer long-term focus: 'Learning to collaborate cross-culturally will help position me to succeed in the global workforce'. Reframing training materials and survey questions aligned the workforce goal more tightly with perceived preparedness and the value of cultural awareness and respect as effective and appropriate workforce behaviors, e.g. communicative competence and disposition ([Byram, 1997](#); [Hanvey, 1976](#); [Paige, 1993](#)).

In Year 2, the negative shift was less prominent, but the post-module negative responses still grew compared to the pre-responses. To prepare for Year 3, Gazelle International trainers dedicated more time in training on workforce readiness, helping teachers explore employer expectations specific to their fields and more generally accepted professional competencies. Shared best practices from past CLICK modules helped teachers add career preparedness to their modules. To incorporate reflection activities, Gazelle International created a training resource on articulating CLICK skills for employers, enumerating concrete behavioral examples of SLOs and a student reflection activity that explored reasonable expectations for workforce skills.

In Year 3, the pre to post-module survey gap reversed with post responses being slightly more positive than pre-responses and no negatives. Our findings suggest that teachers and students initially may not have fully understood the ways VE could support transferable skills and career readiness. Given that including SLOs on a shared syllabus is often not enough on its own and additional conversation with students around SLOs is needed ([Driscoll & Wood, 2007](#)), CLICK training added instructional materials for teachers to help their students articulate SLOs that corresponded to skills that employers seek in college graduates: effective communication, working in diverse teams, analytical reasoning, complex problem-solving, creativity, and other skills that overlap with intercultural competence ([AACU, 2011](#); [British Council, 2013](#); [Hart Research Associates, 2015](#)).

5.2.3. *SLO 3: Increased ability to deploy 21st century skills (e.g. technology and teamwork)*
(see Section 4.1.3, [Figure 5](#) and [Figure 6](#))

Students overall felt prepared for the technology demands of the CLICK modules, though there was a wider variation in the post responses and an increase in negative responses, with an addition of a few strongly negative in both US and abroad groups. Students may have discovered that their prior peer communication and technology patterns were not a solid foundation for using technologies in professional or educational settings, a common assumption (Creighton, 2018).

In response to persistent post-module negative responses, Gazelle International trainers introduced a new framework for technology use in training and support efforts. It provided simple pros and cons of different learning platforms, clearly linking supplemental tools to different pedagogic tasks¹³. In his review of TPACK development efforts in higher education, Mourlam (2017) indicates that faculty should recognize their technologic weakness and welcome content-relevant and pedagogic information to guide their techno-pedagogic choices. Using workshops to integrate technologies into learning activities is a common practice in TPACK faculty development (Mourlam, 2017).

To model the learning processes their students would encounter in CLICK teamwork, training workshops added interactive exercises that faculty completed using a range of tools useful for student teamwork, e.g. WhatsApp, Padlet, Google Suite, Linkr. Starting in Year 2, teachers welcomed the idea of multi-tasking learning activities, i.e. students assisting one another to learn a tool as an icebreaker to create confidence in technology while also developing team trust. Gazelle International trainers introduced quick-response mentoring and troubleshooting support beginning in Year 2 by forming WhatsApp groups with CLICK teachers and the training facilitators who had developed good relationships during training. TPACK research shows teachers welcome mentoring, especially when it directly aligns with their goals (Mourlam, 2017).

In relation to students' preparedness for intercultural collaboration, the responses decreased in level of agreement pre- to post-module. Growing negative statements in post responses could suggest students found collaboration harder than expected and developed a growing awareness of the demands of intercultural work. Similar to technology preparedness, the cultural collaboration gap shrank a little each year. Gazelle International trainers provided examples and encouraged teachers, both in training and ongoing mentoring, to add intentional intercultural team-building early in their modules and different check-in points for students to reflect on their team and intercultural experiences (Fluijt et al., 2016; Murawski & Lochner, 2017).

13. Blog post: <https://www.gazelle-international.org/post/technologies-for-virtual-exchange>.

5.3. What qualitative data reveal about SLOs

The qualitative responses in thematic clusters added nuance to our understanding of the Likert scale results on SLOs (see Section 4.3, [Table 1](#) and [Table 2](#)). Triangulating the results in conversation with the CLICK teachers helped to corroborate our understanding and shed light on class and campus context to develop improved strategies for teacher training and support. For example, we showed that students felt they had not developed broader global perspectives and felt less prepared for intercultural teamwork. Intercultural elements of collaboration were students' major challenges (48%), combining communication foregrounding language barriers and collaboration-teamwork. In contrast, in terms of VE rewards, the top 78% of responses used concrete descriptors of these SLOs in the students' own words, i.e. made friends abroad, broadened perspectives, teamwork/collaboration, and improved communication, demonstrating positive gains in various elements of intercultural competence ([Aerts et al., 1994](#); [Byram, 1997](#); [Council of Europe, 2016](#); [Deardorff, 2004](#); [Hanvey, 1976](#); [Paige, 1993](#)). This supports the notion that students were recalibrating their self-perception and understanding of both the degree of difficulty and value in developing these attributes.

The second tier of challenges and rewards in qualitative responses were grouped as project management, which accounted for 40% of perceived challenges including technology, time zones, organization, and project management. On the other hand, the second tier of rewards were grouped as personally pragmatic, which accounted for 16% including finishing successfully, prospect of getting to travel, real-world applications of learning, and CV/resumé or career advantages. The rewards presented in this paper, especially 'finishing successfully', suggested that overcoming the major project management challenges was a major source of pride.

These additional insights into SLO results help guide improvements in learning activities and teaching strategies. We showed a consistent if small post-module increase in deep negatives around technology preparedness, a key 21st century skill. The qualitative responses identifying internet reliability or hardware issues as a cause for frustration helped Gazelle International avoid adjusting learning tools too much and instead ensuring that teachers explore connectivity issues in the design process and through check-ins during the module. Intercultural collaboration and the global workforce showed a positive pre- to post-module shift each year: nine (3%) students described rewards as "real world experience" and resumé/CV or career advantages. Using students' own words can help teachers mirror them in learning activities and align program, module, and student goals.

Student responses revealed specific challenges in communication, particularly language issues, and collaboration that warranted teachers front-ending more opportunities for team-building,

communicative competence, or intercultural development to equip students with the necessary foundation for tackling more complex tasks (Wiggins & McTighe, 2005). As a result, VE module training dedicated more time to increase team-building early on and add periodic check-ins with students about intercultural collaboration to better align SLOs, class assessments, and course design (Wiggins & McTighe, 2005).

5.4. Limitations

Student self-reporting on assessments is relatively weak but does reveal student opinions of the program and their confidence in global engagements. There was also a large drop in survey responses, falling from 100% to 60% pre- to post-module, which may have affected our findings. The surveys were conducted in English while many students' first language was not English. CLICK teachers, both US and abroad, helped students understand the questions, which could have affected responses. Lack of understanding of what intercultural collaboration means affected responses in the closed-ended questions. In the open-ended responses, students clearly identified the concrete components of intercultural collaboration, e.g. teamwork, language, and communication. In the future, we plan to adapt the survey wording and formatting to reflect key skills that demonstrate effective intercultural collaboration. Open-ended responses also identified specific logistic challenges to collaboration that could separate logistics from intercultural and social elements in the closed-ended questions.

6. Conclusion

The growing field of VE is working to close a gap in research and assessment of VE's impact on SLOs (O'Dowd, 2017), as seen in the work of Baroni et al. (2019), EVOLVE Project Team (2020), and the Stevens Initiative (2020b). This study, following the Stevens Initiative's (2020b) recommendations, provided teacher training, resources, and ongoing mentoring combined with assessment of students, faculty, and program goals, which created a successful framework for a start-up internationalization strategy. Using Wiggins and McTighe's (2005) theorization of backward design principles, aligning VE module goals and activities with overall program goals allowed student assessment and result reporting to inform improvement strategies. Just as Murawski and Lochner (2017) argue for reflection activities for students and Fluijt et al. (2016) emphasize the importance of reflection for co-teaching teams, program leadership and Gazelle International as service provider used reflection on SLO assessment results as an important tool to reevaluate goal progress and redesign training sessions and resources. Driscoll and Wood (2007) assert that teachers can and should use feedback and assessment results to modify their syllabi in order to improve SLOs. Likewise, the assessment of

SLOs in VE opens the door for an iterative approach that consistently uses results to modify syllabus and program design to help students progress toward goals.

As higher education continues to undergo significant changes, VE can play a major part in campuses' comprehensive internationalization strategies. When creative teachers have strong pedagogical training and support based on the monitoring and assessment of student learning, students can develop intercultural competence, confidence in entering the global workforce, and fluency in 21st century skills. VE program building is more readily achievable when program and student goals are met and the positive results are shared with campus stakeholders (Stevens Initiative, 2020a). We lack the student data needed from campuses to address the long-term effects of a VE experience on students' subsequent global activities, future career, or degree completion. Future directions of research should investigate the longitudinal impact of achieving VE goals on career and educational experiences.

We hope our results and lessons will encourage faculty and leadership to incorporate VE into their internationalization plans. With an iterative and goal-based approach, connecting the dots from SLOs to program goals and back is a powerful yet simple program building tool. When well-trained and supported, the first VE teaching cohort motivates the next and everyone applauds the growing numbers of globally-engaged students.

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Published by University of Groningen Press | UGP, a not-for-profit press
Groningen, The Netherlands | UGP@rug.nl

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Journal of Virtual Exchange 2021
Special issue edited by Carine Ullom and Müge Satar

Publication date: 2021/12/17

Journal of Virtual Exchange (JVE) is an online, open-access, peer-reviewed journal aimed at practitioners and researchers in the field known variously as virtual exchange, telecollaboration, or online intercultural exchange. It is the official journal of UNICollaboration (<https://www.UNICollaboration.org/>), the international academic organisation dedicated to supporting and promoting telecollaboration and virtual exchange in higher-level education.

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ISSN: 2647-4832 (online only)

APPENDICES

Appendix A. Detailed demographic information of student respondents (2017-2020):

Respondent Detailed Demographics (2017-2020)		Pre-	Pre- (%)	Post-	Pre- (%)
Gender Pre- (N= 340) Post- (N= 191)	Male	155	45.6%	78	40.8 %
	Female	183	53.8%	113	59.2 %
	Others	2	0.6%	N/A	N/A
Nationality Pre- (N= 341) Post- (N= 202)	US	153	44.9%	94	46.5 %
	Abroad	188	55.1%	108	53.5 %
Race/Ethnicity (US-based students) Pre- (N= 113) Post- (N= 65)	White or Caucasian	73	64.6%	41	63.1 %
	Black or African American	15	13.3%	5	7.7 %
	Hispanic or Latino	17	15.0%	15	23.1 %
	Asian or Asian American	5	4.4%	2	3.1 %
	Other race/ethnicity	3	2.7%	2	3.1 %
Note: The survey instrument did not collect age data, so teachers estimated most students were 18-25.					

Appendix B: Pre- and Post-module Student Survey Questions (2017-2020)

Below is a list of questions and modifications in student pre- and post-CLICK module surveys for a United States Community College System (US-CC) for Years 1-3 (2017-20), courtesy of Gazelle International. The Likert scale questions are organized here according to student learning outcomes (SLOs), as discussed in this paper. The 5-point Likert scale responses were coded with a number, where 1= Strongly Disagree and 5= Strongly Agree.

The survey contains: Years 1-3, twelve closed Likert scale questions; Years 2-3, an additional five multiple choice items on campus, teacher, educational institution country, gender, race/ethnicity (only United States), and if the student has a passport. In Year 1, students indicated their educational institution country and gender in open-ended questions. In Year 2, we re-formatted these as multiple-choice to improve response clarity. In Year 2, we added open-ended questions regarding previous study or travel abroad and other languages spoken. In Year 3, we added an additional open-ended question on student major or program of study and added unique identifiers to track individual change in pre- and post-module responses. For use or questions, please contact the paper's corresponding author.

Socio-demographic Information	
	Educational institution and country Program of study/major Student ID
	Race and ethnicity (<i>US students only</i>) Gender
	Possession of passport and from what country Previous study or travel abroad and to what countries/for how long Other languages spoken
Likert scale, Learning Outcome 1: Greater intercultural competence and awareness of the wider world	
Pre-	The CLICKs Learning Module component of this course will introduce me to a new outlook and new ways of thinking about how I relate to the world.
Post-	The CLICKs Learning Module component of this course introduced me to a new outlook and new ways of thinking about how I relate to the world.
Pre- and post-	I regularly read about world news and events to learn about people in other nations/cultures.
Pre- and post-	I appreciate the value of different cultural perspectives.
Pre-	The CLICKs Learning Module component of this course will change my perception of another culture or country.
Post-	The CLICKs Learning Module component of this course changed my perception of another culture or country.

Pre- and post-	It is important to communicate in more than one language.
Pre-	Through the CLICKs Learning Module experience, I hope to make connections with students in another country that I will maintain beyond this course.
Post-	Through the CLICKs Learning Module experience, I made connections with students in another country that I will maintain beyond this course.
Likert scale, Learning Outcome 2: Increased confidence in finding future success in the global workforce	
Pre-	Learning to collaborate cross-culturally will prepare me for the global workforce.*
Post-	Learning to collaborate cross-culturally has helped prepare me for the global workforce.*
Pre-	I feel prepared for the cultural aspects of collaboration with faculty and students at the partner institution.**
Post-	I was prepared for the cultural aspects of collaboration with faculty and students at the partner institution.
Pre- and post-	I have a hard time communicating with people who do not speak or write clearly in my native language.
Likert scale, Learning Outcome 3: Increased ability to deploy 21st century skills (e.g. technology and teamwork)	
Pre- and post-	I like to work with other people on group projects***
Pre-	I feel prepared for the technology demands of the CLICK Module.
Post-	I feel I was prepared for the technology demands of the CLICK module.
Pre-	I look forward to interacting with students from other countries.
Post-	I enjoyed interacting with students from other countries.
Looking toward the future	
Post-	How have your plans to study or travel abroad changed since participating in the CLICKs project? What is new? Where would you like to go? When? (added Year 2****)
Post-	Would you be interested in doing another CLICKs project, given the opportunity? (added Year 3)
Open-ended (Qualitative Results)	
Pre-	What do you think will be your biggest challenge with the CLICKs Learning Module?
Post-	What was your biggest challenge with the CLICKs Learning Module?

Pre-	What do you think could be the greatest reward from participating in this CLICKs Learning Module?
Post-	What was the greatest reward from participating in this CLICKs Learning Module?

**In Year 2, this question was changed to read, “Learning to collaborate cross-culturally will help position me to succeed in the global workforce” in both pre- and post-CLICK surveys.*

***In Year 2, this question was changed to read, “I feel I am prepared for the cultural aspects of collaboration with faculty and students at the partner institution in the other country” on the pre-survey and “I feel I was prepared for the cultural aspects of collaboration with faculty and students at the partner institution in the other country” in the post-survey.*

****In Year 2, this question was changed to read, “I feel prepared to work as a productive team member for group work in the CLICKs module” on the pre-survey and “I feel I was prepared to work as a productive team member for group work in the CLICKs module” in the post-survey.*

*****In Year 3, this question was changed to a 5-point Likert scale question that read, “The cross-country team and learning experience of the CLICKs learning module influenced me to adjust my major, field of study, or career plans.*

Appendix C: Participating Campuses and Details of CLICK Modules

The summary table lists the unique campus sites (n=14) that hosted CLICK modules by country and number of modules. The campus list is not in order of module teaching teams. French campuses were all IUTs. US campuses were all community colleges in the state system studied. The Mexican campus was a university. Following the table, a set of case samples provides details of CLICK modules (2017-20) discussed in this research.

US campuses (state system)	# of modules (n=13)		Abroad Campuses (country, campus)	# of modules (n=13)
1	1		1 (France)	1
2	1		2 (France)	1
3	1		3 (France)	1
4	1		4 (France)	2
5	2		5 (France)	2
6	3		6 (France)	4
7	4		7 (Mexico)	2

CLICK Module: The French-American Film Connection, Spring 2020 (Year 3)

University Partners	Community College, USA Technical Institute, France
Discipline (Course)	English for Mechanical Engineers Film Club
Project Summary	In international teams, students chose a topic and wrote, filmed, and edited a short film accessible to English and French audiences (3-8 minutes).
Project Length	11 weeks
Technology Tools	Zoom, WhatsApp, Google Classroom, Microsoft Teams, Youtube
Team Details	Teachers - 2 US, 1 FR Students - 7 US, 5 FR

Highlights	<ul style="list-style-type: none"> Ran a CLICK project through the change to online teaching in the COVID-19 crisis.
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CLICK Module: International Banking, Spring 2020 (Year 3)

University Partners	Community College, USA Technical Institute, France
Discipline (Course)	Business/Marketing English for Business/Marketing
Project Summary	Students worked in international teams to perform a SWOT (strengths, weaknesses, opportunities, threats) analysis on an international bank. They completed a preliminary grid with the information they obtained. Then, they surveyed other students to find out what potential consumers are looking for in a bank. Finally they gave a presentation of their findings from the surveys they conducted as well as recommendations to improve the bank.
Project Length	4 weeks
Technology Tools	Zoom, WhatsApp, Google Classroom, Google Suite, SurveyMonkey
Team Details	Teachers - 1 US, 1 FR Students - 14 US, 19 FR
Highlights	<ul style="list-style-type: none"> Ran a CLICK project through the change to online teaching in the COVID-19 crisis.

CLICK Module: Impact of National Cultures in Web Design, Spring 2020 (Year 3)

University Partners	Community College, USA Technical Institute, France
Discipline (Course)	Business/Marketing Business/Marketing
Project Summary	In international teams, students analyzed the websites for McDonalds, Starbucks and Disney World. They identified best practices, made comparisons between websites, and offered recommendations for improvement.
Project Length	6 weeks
Technology Tools	Facebook Private Group, WhatsApp, Zoom

Team Details	Teachers - 1 US, 1 FR Students - 4 US, 6 FR
Highlights	<ul style="list-style-type: none"> Ran a CLICK project through the change to online teaching in the COVID-19 crisis.

CLICK Module: Communicating in Color: Artists and Engineers, Fall 2019 (Year 3)

University Partners	Community College, USA Technical Institute, France
Discipline (Course)	Art English for Electronics and Electrical Engineering
Project Summary	Students worked in cross-national teams and created a color-related question that they wanted to explore, ideally with an international focus. Then they designed and carried-out an experiment to answer their question.
Project Length	12 weeks - full semester
Technology Tools	Linkr Education, Zoom, Whatsapp, Google Docs, Prezi
Team Details	Teachers - 1 US, 1 FR Students - 20 US, 25 FR
Highlights	<ul style="list-style-type: none"> FR teacher planned to visit US teacher in March 2020. US teacher planned to visit FR teacher in Summer 2020 (canceled due to COVID-19).

CLICK Module: Working like an International Engineer: Connecticut and France, Fall 2019 (Year 3)

University Partners	Community College, USA Technical Institute, France
Discipline (Course)	Mechanical Engineering Introduction to Engineering
Project Summary	Students identified a current problem that engineering could solve, eg. how to keep your coffee hot or stop your phone charging cable from breaking. Teams worked on designing and testing a solution to their chosen problem using engineering principles and methods.
Project Length	12 weeks - full semester
Technology Tools	Linkr Education, Zoom, email, Facetime, paper log book in the

	classroom
Team Details	Teachers - 1 US, 2 FR Students - 17 US, 6 FR
Highlights	<ul style="list-style-type: none"> • French students acted as design consultants, supporting the US students' design and fabrication efforts • Students designed and built solutions to day-to-day problems

CLICK Module: Communications in Global Logistics, Fall 2019 (Year 3)

University Partners	Community College, USA Technical Institute, France
Discipline (Course)	Communications English - Logistics & Transport
Project Summary	Students presented Zara's supply chain as a business model in a joint presentation or video.
Project Length	6 weeks
Technology Tools	Slack, Google Drive, Google Slides, video recording, iMovie, Skype,
Team Details	Teachers - 1 US, 1 FR Students - 25 US, 16 FR

CLICK Module: Data and Cross-Cultural Collaboration, Fall 2019 (Year 3)

University Partners	Community College, USA Technical Institute, France
Discipline (Course)	Quality Control, BioTech Industry Statistics
Project Summary	Teachers shared quality control data and students performed statistical analysis, participating in live chats and recording video presentations.
Project Length	10 weeks
Technology Tools	EdModo, video recording and editing programs
Team Details	Teachers - 1 US, 2 FR Students - 8 US, 12 FR
Highlights	<ul style="list-style-type: none"> • FR teachers and students planned to visit US team (canceled due to COVID-19).

CLICK Module: Entering the US: Testing the Market for French Business, Spring 2019 (Year 2)

University Partners	Community College, USA Community College, USA Technical Institute, France
Discipline (Course)	Business Marketing Global Business Entrepreneurship
Project Summary	US “consultants” helped French entrepreneurs test the feasibility of market entry into the US for three different businesses.
Project Length	8 weeks
Technology Tools	Linkr Education, Google Docs, WhatsApp, Zoom, PowerPoint
Team Details	Teachers - 2 US, 1 FR Students - 12 US, 8 FR
Highlights	<ul style="list-style-type: none"> • 1 US teacher and several US students joined the “Disruptor” summer camp in Caen, France, in June 2019 • The food truck and “test kitchen” businesses were the most likely to succeed in US

CLICK Module: Global Understanding of Antibiotic Resistance in the Soil, Spring 2019 (Year 2)

University Partners	Community College, USA Technical Institute, France
Discipline (Course)	Microbiology and Statistics English Language French Language
Project Summary	Student teams completed hypothesis setup, field sampling, and statistical analysis of FR & US soil for antibiotic resistance and reported results.
Project Length	8 weeks
Technology Tools	Linkr Education, Google Docs, WhatsApp, Zoom, PowerPoint; additionally, microscopes, slides, and reagents
Team Details	Teachers - 2 US, 2 FR Students - 27 US, 46 FR
Highlights	<ul style="list-style-type: none"> • 3 US teachers visited FR partner in France; 1 FR partner visited US • Sent field research results to Tufts University PARE program (Prevalence of Antibiotic Resistance in the Environment); used global protocols for data collection, analysis and reporting

CLICK Module: Global Manufacturing: Designing a ‘Babyfoot’ Game for the US Market, Spring 2019 (Year 2)

University Partners	Community College, USA Technical Institute, France
Discipline (Course)	Mechanical Engineering Mechanical Engineering
Project Summary	Teams shared design, build, and testing of table-top soccer “babyfoot” game with cost and time controls of the manufacturing process (branded “ <u>Team Fortis</u> ” with avatar).
Project Length	12 weeks - full semester
Technology Tools	Linkr Education, Google Docs, WhatsApp, Zoom, PowerPoint, CAD, 3D printers; additionally, screwdrivers and saws
Team Details	Teachers - 1 US, 2 FR Students - 6 US, 10 FR
Highlights	<ul style="list-style-type: none"> Teams built a physical table-game 1 US student joined “Team Fortis” in France, <u>Carousel week</u> engineering competition with cross-national teams

CLICK Module: Understanding Cultural Differences in Media through Digital Communication, Spring 2019 (Year 2)

University Partners	Community College, USA University, Mexico
Discipline (Course)	Elementary Spanish Communications
Project Summary	Teams analyzed the differences in media (movies, television, magazines, etc.) communication with a focus on the cultural differences between the U.S. and Mexico.
Project Length	11 weeks
Technology Tools	Private Facebook group, WhatsApp, Zoom, Moodle/Blackboard
Team Details	Teachers - 1 US, MX Students - 11 US, 15 MX
Highlights	<ul style="list-style-type: none"> Bilingual: students used both English and Spanish Final synchronous meeting held with college leadership from both campuses

CLICK Module: Clear Messages, Complex Topics: Health and Technology, Spring 2018 (Year 1)

University Partners	Community College, USA Technical Institute, France
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Discipline (Course)	English (1000-level), Health Sciences (Bio/Chem capstone) English for Network Management
Project Summary	Teams used technology to produce a clear message about a controversial health topic in a long blog post for friendly, skeptical, and professional audiences. They selected appropriate sources in health and technology.
Project Length	4 weeks
Technology Tools	Google Docs, Skype, WhatsApp, Padlet
Team Details	Teachers - 2 US, 2 FR Students - 26 US, 23 FR
Highlights	<ul style="list-style-type: none"> Used “France 24”, French platform in English focused on French science, tech innovation news and breakthroughs

CLICK Module: Expression through Digital Media, Fall 2017 (Year 1)

University Partners	Community College, USA University, Mexico
Discipline (Course)	Elementary Spanish Communications “Contemporary Themes” (3000-level)
Project Summary	Teams completed joint research on contemporary topics and wrote scripts in Spanish. They developed final videos of their topics.
Project Length	4 weeks
Technology Tools	Private Facebook group, WhatsApp, Zoom, Moodle/Blackboard
Team Details	Teachers - 1 US, 1 MX Students - 10 US, 11 MX
Highlights	<ul style="list-style-type: none"> Bilingual: students used both English and Spanish Capstone project team videos completed completely in Spanish Elementary Spanish class far exceeded normal language learning results Completed module despite earthquake disruption mid-term